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ADDRESS

DELIVERED BEFORE THE

American Academy of Dental Science,

AT THEIR

ELEVENTH ANNUAL MEETING,

HELD IN BOSTON, OCT. 30, 1878.

BY CHARLES W. ELIOT, LL.D.,

PRESIDENT OF HARVARD UNIVERSITY.

CAMBRIDGE :

PRESS OF JOHN WILSON AND SON.

1879.

NO. 5 PARK STREET, BOSTON, JAN. 9, 1879.

CHARLES W. ELIOT, LL.D., President of Harvard University :

DEAR SIR, — At the Eleventh Annual Meeting of the American Academy of Dental Science, held in Boston, Oct. 30, it was unanimously resolved: "That the hearty thanks of the Academy be presented to President Eliot, for his very able and excellent address; and that a copy be requested for publication, and for preservation in the archives of the Academy."

Sincerely hoping that you will comply with this request, I am, with high regard,

Very respectfully yours,

EDWARD N. HARRIS,
Corresponding Secretary.

HARVARD UNIVERSITY,
CAMBRIDGE, MASS., 11 Jan., 1879.

DEAR SIR, — It will give me much pleasure to write out in a suitable form for publication the remarks which I made at the Annual Meeting of the Academy of Dental Science in October last. Be pleased to convey to the Academy my respectful acknowledgment of the honor they do me in publishing my address, and believe me, dear sir, with great regard,

Very truly yours,

CHARLES W. ELIOT.

Dr. EDWARD N. HARRIS, Corresponding Secretary.

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ADDRESS.

MR. PRESIDENT, AND MEMBERS OF THE AMERICAN ACADEMY
OF DENTAL SCIENCE:—

In asking me, who am not a dentist, to speak to you, you have determined beforehand, for yourselves, the subject of this annual address. You doubtless thought that, as it is my duty to watch the condition and observe the methods of professional education in general, and to study the means by which the liberal professions have been recruited, organized, and invested with dignity, my experience might enable me to make some useful suggestions concerning dental education and the means of improving the state of the profession of dentistry. At any rate, these topics are the only ones which my training and occupation fit me to treat before a body like this; so that your expectation and my desire to be of some service, however slight, to the Academy and the profession, both point to the same themes.

In comparison with the three professions ordinarily called learned, dentistry is a new profession. It can

hardly be said to have existed in this country for more than seventy years, or two generations of men. The elder professions of theology, law, and medicine, have been forming their usages, gathering their traditions, and establishing themselves in the respect and confidence of mankind for centuries; and it cannot be expected that a profession so recent in origin as dentistry should already have acquired as firm a position as theirs, or safeguards as effective as theirs against injurious influences from within and from without.

On the whole, the development of dentistry in this country during the past seventy years has been extraordinary in many respects. The invention of numerous instruments and mechanical appliances of great ingenuity, the discovery of new processes, the increase in the number of dentists and in the number of patients, the production of a dental periodical literature and of many books upon dentistry, and the creation and growth of dental schools, are some of the most striking phenomena of this development. Many causes have of course conspired to produce so remarkable a growth; but among these causes four deserve special mention. In the first place, the laboratory and operating-room of every dentist bear witness to the wonderful fertility of the American people in mechanical inventions. This fertility, with its many advantages, has one serious drawback, — it seems to have excluded or dwarfed all other kinds of inven-

tiveness. Secondly, the American mind is singularly hospitable to innovations ; that an idea, a thing, or a process is new, commends it to Americans as to no other people. Now, “every medicine is an innovation,” as Lord Bacon says ; and, much more, every extraction or filling of a tooth is an innovation — often a startling one. Thirdly, the lamentable carelessness of Americans about fresh air, exercise, and a healthful diet has had a great effect to promote the growth of dentistry ; for artificial teeth, and operations to delay the destruction of the natural teeth, are more needed here than in countries where the habits of the population are more wholesome. The European peasantry have small need of dentistry. Moreover, artificial teeth give better satisfaction to people who, like most Americans, want to eat nothing but soft food, than they do to people who have hard food to masticate. Lastly, a moral cause — a compound of hopefulness and endurance — has been a potent one. Patience under present annoyance or pain, in the hope of a future advantage, is a national characteristic which has many manifestations. Many educated Americans habitually go to a dentist twice a year, and submit to uncomfortable or painful operations, in the expectation of thereby securing a degree of exemption from future suffering which will leave the balance decidedly in their favor. An educated European, on the other hand, to the best of my observation, seldom goes to a dentist, except for relief when

his teeth actually hurt him, just as he waits to send for a physician until he feels sick. For these reasons, with others, dentistry has grown faster in the United States than in any other country; and in Europe, for thirty years past, the art has been considered pre-eminently an American art, and the most successful practitioners in the European capitals have been American by birth or training.

If, then, the development of dentistry has been, on the whole, so remarkable during the past seventy years, why is it that dental magazines, and dental societies in their discussions, are now constantly recurring to two subjects, — namely, the means of improving dental education, and of raising the profession in public estimation and its own regard? Are there real grounds for the anxiety which prompts the unceasing discussion of these subjects? For that kind of anxiety which induces action to avert threatened evils, there seems to be some real occasion. It is well known, in the first place, that thousands of rude, ignorant men have entered the profession, attracted by its apparent profitableness, and debarred by no law, no established usage, and by no intelligent discrimination of the public against uneducated practitioners. In the second place, it is not a favorable sign that the best literature on dentistry is not of American origin, — that literature, namely, which manifests sustained scientific enthusiasm, and is the result of disinterested devotion to study, on the one

hand, and to teaching, on the other. The condition of the dental schools, which have been established throughout the country, gives another real ground of anxiety about the future of the profession. These schools receive but a small proportion of the men who enter the profession; and they set before the young men who do enter them much too low a standard of attainment. As the future of a profession — whatever may be its present — is largely determined by the nature of the education which the youth who enter it receive, it is the condition of dental schools — the organized means of education for the profession — which should first engage the attention of those who wish to place dentistry on a level with the learned professions. All the evils which threaten the profession would gradually but surely disappear, if dental schools could be made independent, strict, and thorough, and public opinion could be so enlightened as to make the calling inaccessible or profitless to uneducated men. Let us, then, examine the various points at which American dental schools admit of improvement.

The first fact which strikes one, at the outset of an inquiry into the methods and practices of dental schools, is that most of them do not demand, as a qualification for admission, any preliminary education whatever. No matter how ignorant and untrained a man may be, most dental schools are open to him. Three schools, two of which are by no means of the

strongest sort, state in effect that a knowledge of the ordinary branches of an English education is necessary for admission. This statement is obscure ; but it probably means that candidates for admission must be able to read, write, and cipher. Until very recently, all the medical and law schools in the United States were in the same ignominious condition as regards accessibility to the ignorant ; so that this disgrace is by no means peculiar to dental schools. Among American professional schools, the theological schools alone, and not all of them, have escaped this degradation. The disastrous consequences have been brought to light only within recent years ; for very few professional schools in this country are over forty years old, and it takes a generation, at the least, to exhibit the fruits of mistakes in educational systems ; but the consequences have been grave enough already to excite the alarm of the professions, and to induce leading schools in both law and medicine to institute admission examinations. It would be difficult to exaggerate the effect, upon the estimation in which the professions of medicine and dentistry are held, of the fact that, until within two years, these professions have been accessible to men who could barely read and write, and have been actually entered by thousands of persons who never received, at school or college, the early training which, in the great majority of cases, is an essential preliminary to a life of refinement and cultivation. It is the more important

that dentists should be cultivated men, because dentistry is a calling necessarily pursued for the most part in cities and large towns, and because, on the whole, the profession relies for its support upon the educated part of the community. Like the physician, the dentist comes into more or less confidential relations with his patients, although he never is obliged to take the heavy responsibility which now and then is suddenly laid upon the physician. To be the equal or the superior of his patient in general cultivation is most desirable for a dentist: he should be as gentle in speech and manners as in touch.

The English Parliament has lately enacted (Dentists' Act, 1878, 41 & 42 Vict. ch. 33) that dentists in Great Britain and Ireland shall hereafter be persons approved and licensed by competent professional bodies, and registered by government; and, in England, the authorized licensing body (the Royal College of Surgeons) has already prescribed a preliminary examination in arts, which all candidates for admission to the Dentists' Register must pass before they begin their professional training, unless they are Bachelors of Arts or have passed certain specified university examinations. This examination covers English, Latin, arithmetic, algebra, geometry, geography, and English history, and any one of the following subjects at the candidate's option: Greek, French, German, mechanics, chemistry, and botany and zoölogy. The examinations are all elementary in character, but their

range is considerable. There is no need of argument to prove that such conditions of entrance as these will, in the course of twenty years, greatly improve the quality of the mass of the profession in England ; and it is the mass, and not the few persons of exceptional gifts, that educational regulations are always intended to affect. If American dentistry, as a profession, is to maintain its rank in the world, it must be defended by similar requisitions against the incursion of uneducated men.

It is undoubtedly within the power of the profession itself, if it be so minded, to procure the establishment of admission examinations at dental schools. The force of a concentrated public opinion in any profession is very strong ; and it need not be the opinion of the majority, if only it is the opinion of the more intelligent part of the profession forcibly and incessantly expressed. The great improvements in medical education, which have been made by a few schools in this country since 1871, illustrate strikingly the effectiveness of professional opinion, when exerted for the purpose of directing into better ways and to higher ends professional education. These improvements might not have been attempted but for the urgency of the best part of the medical profession, and they certainly could not have been successfully carried into effect without the steady and hearty support of the profession as a whole. Again, the standard of admission to the bar in the State of New York has been

much raised within eighteen months, solely by the force of professional opinion made effective in the legislature and the courts ; and this was accomplished not only without the help of the local law schools, but in spite of all the influence they could exert. The fact is, that any profession, if it is in earnest, can find weapons with which to defend itself against deterioration. It should be borne in mind that it would be sufficient to regulate properly future admissions to the profession. If the future be made safe, the evils of the present can be patiently endured. In surprisingly few years, the well-educated young men would push out those older untrained practitioners whom not even the practice of many years had much informed.

But if this absence of a preliminary examination to secure some degree of liberal education is an evil common to most schools of law and medicine, as well as to dental schools, this common lack will not explain the admitted fact that graduates in dentistry do not stand on a level with graduates in law and medicine in public esteem. The reasons for this disadvantageous position of dental graduates must then be sought elsewhere ; and they are not far to seek.

The period of study for the dental degree is decidedly shorter than for the medical degree or for admission to the bar. Three full years of medical study are required of candidates for the degree of doctor of medicine, and three years of legal study is the common requirement for admission to the bar.

In most American dental schools, two years is the period of study demanded of candidates for the degree, and one of these years may be replaced by five years of practice. Two schools have very lately required of candidates for their degree three years' study of dentistry, and one other school has given notice that it intends to make that demand. On the other hand, two schools offer their degree upon examination after attendance upon a lecture course of four months' duration, without further inquiry into the candidate's qualifications. During the two years which constitute the common period of study, the dental student must give a large part of his time to the acquisition of manual skill. For those studies which cultivate and enrich the mind, the ordinary period of dental education gives small opportunity indeed. The alert intelligence, the scientific habit of thought, the power of original investigation — precious products of prolonged study — the dental student cannot hope to acquire during his brief apprenticeship. The training which an intelligent and faithful student of medicine receives during his three years of study is very valuable, regarded merely as intellectual discipline. Even if his preliminary education has been neglected, the assiduous medical student has some chance of acquiring power of application, and the habit of scrutinizing phenomena, and comparing and reflecting upon facts. The dental student has no such opportunity of culture: his time is shorter, and he must

learn to use his fingers and his instruments. It is clear, therefore, that the public is quite right in setting the average graduate in dentistry below the average graduate in medicine; for the young dentist has not had more than half of the mental training of the young physician, and must be his inferior both in acquired knowledge and in disciplined power. A prolongation of the period of dental study is absolutely essential to the establishment of the profession upon an equality with the older professions.

Again, the dental schools have copied from American medical schools the irrational division of the year into a fall term, a winter session, and a spring term. The fall term is a disconnected fragment; the winter session is supposed to be complete in itself, and therefore inevitably becomes an indigestible mass of lectures and demonstrations, crowded one upon another, and repeated without essential change year after year; while the spring term is another fragment, which is neither complete in itself, nor designed to complete what has gone before. Attendance at the winter session only, if once repeated, suffices for graduation, though this obligatory session is in many schools but four months long, and in none more than five and a half months. The Harvard Dental School stands alone in renouncing completely this division of the year, and carrying its instruction consecutively through the academic year, from October 1 to July 1. For the orderly and progressive treatment of

great subjects like anatomy, physiology, and chemistry, it is difficult to imagine a worse division of the academic year than that which has so long prevailed in American medical and dental schools. In their medical schools, Harvard University and the University of Michigan have completely abandoned this unprofitable system, and the University of Pennsylvania is in the way to abandon it. It will be a good day for medical and dental education, when all respectable institutions have adopted the rational method of giving progressive instruction throughout the year.

Many dental schools accept five years of practice as a dentist, instead of one year of study of dentistry, thus still further reducing the already small amount of intellectual training required for the degree. If a man can bring evidence that he has practised dentistry five years, — no matter how ignorantly, — he can obtain the degree of one of these schools by attending a single winter session. Is not the public right in regarding the American dental diploma as small evidence of general culture? Is it always good evidence even of thorough acquaintance with dentistry? Five years of such practice as a person without education is likely to have will afford but limited opportunities for clinical observation and study, compared with those which six months spent at a well-conducted school would supply; and the ignorant practitioner, left to himself without the guidance of experienced teachers,

is in no condition to profit even by those opportunities which offer.

The most carefully administered dental schools, like all medical schools, give weight to practitioners' certificates of time spent in professional study by young men under their charge or observation. The precautions observed in receiving these certificates are too often inadequate. In the first place, these certificates are generally written at the time the student presents himself for graduation, and they therefore reach back over a preceding period which is often three years long. In large schools, it frequently happens that the certifying practitioner is a stranger, living, perhaps, far away, and of unknown competency as an instructor. It is nowadays an admitted fact that physicians and dentists in full practice are seldom willing to give personal instruction to private pupils: they can use their time to better advantage. Accordingly, many certificates are accepted from private practitioners in a form which does not testify that the student on whose behalf the certificate is given has received any personal instruction from the signer, but simply alleges that the young man has pursued professional studies under his observation. Two improvements in this system are much to be desired: the first is, that the commencement of medical or dental study should be certified to at the time, and not years afterward, by the practitioner who has cognizance of it; and that the student's time should count only from the reception of

this certificate at the school where he matriculates : the second is, that certificates should be received only from practitioners who have facilities for giving clinical instruction through their connection with hospitals, asylums, dispensaries, infirmaries, or like establishments, in which opportunity for giving practical instruction is afforded. Both these securities are obtained in England, and there can be no question either of their feasibility or of their value.

A word may be added in regard to a much needed change in the prevailing method of examining for dental degrees. All examinations for professional degrees should be public, in the sense that the questions asked should be accessible to the public, and the answers of candidates should be subject to the inspection of professional men who have not been the teachers of the persons examined. An oral private examination affords no guaranty whatever of the worth of a diploma. If dental societies and legislatures propose to make the possession of a dental diploma an essential preliminary to admission to practice, they will do well to insist in the first instance upon the publicity of examinations for the dental degree.

Finally, it is much to be wished that a moderate number of dental schools might be sufficiently endowed to be reasonably independent of students' fees. With the exception of the dental school of the University of Michigan, which is mainly supported by the

State, the dental schools are dependent for support upon tuition and graduation fees; and so they are tempted to keep their requisitions low, to the temporary pecuniary advantage of the schools, but to the grave injury of the profession and the community. No form of professional education is so little endowed in this country as dental education; partly, no doubt, because of the newness of the calling, and partly also because the need of thorough education for this profession has only lately been brought home to the public mind.

I take up next a subject which has often engaged the attention of dental societies, and been discussed in the periodicals of the profession; namely, the relation between the degree of doctor of medicine and the degree of doctor of dental medicine or dental surgery. Many eminent dentists have regretted the institution of a special dental degree, and have maintained that every dentist should be a doctor of medicine. Let it be granted at once, as a fact beyond dispute, that the full training of a physician and surgeon would be useful to a dentist. He who should follow the three years' course for the doctorate in medicine, and should then give eighteen months or two years to the peculiar studies of dentistry, would be a much better trained man than he who has given but three years in all to professional study. But it is obvious that only those who have extraordinary zeal,

and an unusual amount of money to expend upon their education, will pursue that excellent course. Young Americans who intend to be dentists are, as a rule, by no means ready for such deliberate thoroughness as is implied in the suggestion that they should first qualify themselves as physicians or surgeons, and afterwards as dentists. On the contrary, they are still expecting to be qualified as dentists in two years or less, and the greater number of dental schools are still encouraging this expectation. Whether or not the dentist shall take the doctorate in medicine is at present a practical question in this country only where the dental candidate for the medical degree is permitted to substitute in the three years' course for this degree all the peculiar dental studies for as many proper medical and surgical studies.

To arrive at a clear opinion upon the propriety of allowing such substitutions, and of conferring the one degree of doctor of medicine for courses of study which differ materially, it will be necessary to consider how far medical and dental studies are identical, and how far they are diverse. The fundamental subjects of anatomy, physiology, chemistry, and physics, are, indubitably, common to both courses of study; and it will generally be admitted that materia medica, oral surgery, a considerable part of pathological anatomy, and histology including microscopy, should also be common to both; but, when in the three years' course the time comes for extensive clinical study and the acquisition of

manual skill, the two trainings at once diverge. The dentist needs much technical knowledge and skill which the medical or surgical practitioner never has occasion for; and, on the other hand, the physician or surgeon will daily avail himself of information and experience, for which the dentist will never have any use. Supposing the medical and the dental course of study to be each three years long, not more than three fifths of the studies appropriate to the two courses are common; at least two fifths are diverse.

Unlike degrees in arts, which merely indicate a certain amount of liberal study, no matter in what subjects, professional degrees should plainly declare the precise sort of training for which they stand. Since the training of a dentist upon a three years' course of study is in good measure different from that of a physician or surgeon, it may well culminate in a special dental degree, easily distinguished from the degree in medicine; just as the difference between the training of a civil engineer and of a mining engineer is wisely marked by the use of two degrees, which indicate that the trainings for these scientific professions are in good part diverse, though also in good part common. It is important to the community that the degree of doctor of medicine should have an unmistakable significance: it should signify that the person thus designated has pursued certain professional studies, to the satisfaction of a competent Faculty. Now, if a person who has only pursued three fifths of the appropriate

studies is to have the degree of doctor of medicine, the significance of that degree is obscured and impaired. Moreover, the community will have no certain evidence that the dentist who holds the diploma of doctor of medicine, and not that of doctor of dental surgery or medicine, has ever pursued any dental studies at all. In short, by permitting the use of the one degree of doctor of medicine to designate both physicians and dentists, the community would lose in regard to both professions certain securities which it now possesses.

In the light of these obvious facts, let us consider the recent announcements of certain dental schools, in combination with certain medical schools, that they will give the degree of doctor of dental surgery *and* the degree of doctor of medicine for the same three years of study. Now it is admitted on all hands that three years is not too long a period of training for the degree of doctor of medicine, when the whole time is devoted to proper medical studies; and the best opinion is that three years is not too long a time to give to the professional education of a dentist, the whole three years to be given to appropriate studies and the acquisition of manual skill. Again, we have just seen that not more than three fifths of the subjects appropriate to these two professional courses of instruction are common to the two. Hence it follows that, when the two degrees of doctor of medicine and doctor of dental surgery are given for

the same three years of study, the standard of one or other of the degrees is lowered to a deplorable extent. Beyond a doubt, it is the medical degree which suffers in the first instance; for the standard of that degree is at present higher than that of the dental degree. Indeed, it is not too much to say that the medical schools which have entered into this arrangement manifest in so doing a want of respect for their own degree. They may in this way contribute for a few years to the better education of an inconsiderable number of dentists; but in doing this they obscure the meaning and impair the value of the medical degree, and they hinder the regeneration of the dental schools proper. The injury they thus do to the community by sending out imperfectly educated men bearing the title of doctor of medicine, but not properly prepared to practise the profession, is vastly greater than any benefit which can result from their action, either to their own treasuries or to the dental profession. It is matter for profound regret that reputable medical schools have adopted, perhaps without distinctly perceiving its consequences, this most unwise and discreditable policy.

At the time of the establishment of the Harvard Dental School in 1868, the question was much discussed whether it would be better to institute dental professorships in the medical school, and let that school give a special dental degree, or to create a

separate dental school with its own Faculty, course of instruction, and degree. This question is, however, a question of form rather than of substance; and concerning these different forms of university organization there may well be two opinions as to which is the better. The substance may be secured under either form; and the substance is, that the special diploma which testifies to the public that the holder is an educated dentist shall be procurable only by devoting three years under competent guidance to the appropriate study, clinical observation, and manual practice.

Let me next ask your attention to a brief discussion of some means of elevating a liberal profession which are not educational. Of these, the first which I wish to speak of is protective legislation. In civilized and populous communities, it is possible to exclude by law uneducated persons from the practice of learned professions. The governments of continental Europe have for generations regulated admission to the professions of law and medicine with great strictness. In England, the organization of these professions has resembled that of guilds recognized by law. In this country, until within recent years, the learned professions can hardly be said to have had any protection at all against the incursion of uneducated men. The time has come, however, when even the newer American States perceive the importance of preventing quacks and impostors from tampering with the health

of the population, and of excluding from the fiduciary profession of the law men whose capacity and honor have not the foundation and visible guaranty of good education. Accordingly, it is desirable that the opinion of the professions should be wisely formed and consistently expressed as to the best methods of securing due protection by law. The centralized method adopted in continental Europe — the method of government examinations for admission to government registers — is not applicable in this country, being consonant with neither our political institutions nor our social conditions. A system of examination and registration conducted by the government of the United States is not to be looked for: first, because it is no part of the constitutional business of the national government to regulate the professions; secondly, because the different States and territories have different needs; and, thirdly, because the chance is small that the national government would appoint competent and impartial examining boards in a manner to command the respect of the professions. State legislation must therefore be relied upon. But the State governments are unfitted by their popular and unstable character for the direct conduct of such business as the wise regulation of the learned professions. They almost necessarily delegate that function to professional bodies, acting under laws of a general character. Thus, the right to admit to the bar is placed in the hands of the courts; and chartered medical and dental

societies have received from legislatures the exclusive right to license persons to practise medicine or dentistry. For example, the Statutes of New Hampshire provide that "it shall not be lawful for any person, who is not duly authorized to practise medicine or surgery, to practise dentistry, unless such person has received a dental degree from some college, university, or medical school authorized to confer the same, or shall have obtained a license from the New Hampshire dental society" (Chapter CXXVI. Sect. 3); and this society is duly authorized to appoint examiners whose duty it is to examine and license persons to practise dentistry. The Massachusetts Medical Society, incorporated by the State in 1781, affords an admirable demonstration of the degree of protection which a learned profession can secure under the authority of the legislature delegated to a professional organization. It is through legislation of this kind, which intrusts the right to license to professional bodies, that a defence against ignorance — not complete, by any means, but still of great value — may best be secured for the professions of medicine and dentistry in the States of the Union. A State Register would be likely to become a sanctuary for quacks and empirics of every sort; for professional education is not one of the subjects upon which the popular judgment is valuable, or which may wisely be left to the decision of a majority vote; and legislatures, if well constituted for their ordinary functions (as we must assume them to

be), would certainly be unfit to determine what are the proper qualifications for the practice of medicine or dentistry, and would in all probability admit to registration with a freedom which would make the register rather a refuge for ignorance and imposture than a barrier against them. The just regulation of the learned professions requires steady action upon a definite policy through a long series of years. Now it is just such sustained action which is the most difficult for popular assemblies; so that the delegation of their powers to more permanent organizations is wise and necessary in cases where a far reaching policy is to be unfalteringly pursued. It should not be forgotten that legislation of the restrictive character desired may be much more easily procured, if it be made to apply only to the future. It then becomes the interest of all persons already established in reputable practice to promote such enactments, whereas retroactive legislation cannot but provoke opposition and do some actual injustice. As has been already said in another connection, the main point is to secure the future of the professions.

So young a profession as dentistry may well look, in searching for means of exalting the calling, to the experience of the elder profession of medicine. It cannot fail to be observed that one of the things which makes the profession of medicine a liberal profession is the zeal for scientific research

which animates its representative men throughout their lives. This admirable zeal to discover truth and to make it prevail, the profession of dentistry must emulate — indeed already emulates. In this zeal is to be found, on the one hand, evidence that the profession is entitled to call itself liberal, and, on the other, security for steady growth and improvement.

We see also in the medical profession the great fact of gratuitous practice. I find nothing in the work of missionaries among the heathen nobler or more disinterested than this gratuitous practice by physicians and surgeons among the poor and wretched. It is one of the most admirable of charitable works, and demonstrates with singular force the true liberality of the profession. Many physicians and surgeons of the highest standing give hours every day to hospital, dispensary, or infirmary practice, actuated by the hope of serving their fellow-creatures, by enthusiasm for research, and by desire for self-improvement and for the greater power of doing good which in the practice of medicine follows immediately from any increase of knowledge or skill. The establishment of infirmaries in connection with dental schools has given some dentists opportunities for gratuitous practice; and some hospitals have given still larger opportunities by including among their out-patient departments a dental infirmary. But much still remains to be done before dentistry can claim equality with medicine in this respect. The profession may well urge the

establishment of gratuitous dental departments in public hospitals, children's asylums, and reformatory schools: the actual labor of such services would fall chiefly upon young practitioners, the supervision being exercised by older men.

There is another common attribute of good physicians and surgeons which has had great effect to elevate and liberalize their profession, — I mean their characteristic zeal for teaching. This zeal is manifested not only in giving direct instruction to medical students, but in imparting to medical societies and the public every important fact observed, every useful practice invented, and every suggestive opinion or promising theory conceived. The constant desire and purpose on the part of its members to teach, to impart to all any peculiar knowledge which each may acquire, is one of the principal distinctions between a liberal profession and a trade. Dentistry would have no claim to be called a liberal profession, did not its practitioners manifest this zeal for teaching. In this respect a great change for the better has taken place in the profession during the past twenty years.

Associated action in dental academies and societies is an efficacious means of strengthening the profession. There is wonderful force in association for the pursuit of common objects, and for the interchange of thought upon matters of common interest. The members of any learned profession are necessarily sundered by

personal interests which must sometimes clash : they should be united by a strong professional spirit. Organizations for scientific and social purposes promote a good understanding between their members, diffuse the best professional opinions, maintain a just professional etiquette, and give effect to the weightiest professional character. Dental societies might answer another very important purpose : they might create and maintain a system of recording the life-histories, so to speak, of the teeth of individuals who have been under observation from infancy to age. The prolonged life and permanent records of societies are obviously necessary for this purpose. Many persons employ one dentist in youth, another in middle life, and a third in age ; so that the complete record of any one case might well require the co-operation of three observers. The single practitioner cannot record the life-history of the teeth of any of his patients who live to be old : his old patients he did not know in their youth, and his young patients he will not see in their age. As many of the processes of dentistry must still be regarded as experimental, and as many years are often required to bring even a single dental experiment to an issue, a body of trustworthy facts thus accumulated by permanent professional societies would, in the course of generations, become of great value by supplying decisive means of discriminating between good processes and bad, good materials and bad, wise treatment and foolish. If it be objected

that the life-records of hundreds of thousands of cases would be so bulky as to be practically inaccessible and therefore useless, the answer is, that the modern methods of cataloguing, indexing, and summarizing are quite capable of surmounting that difficulty. In short, dental societies might systematically collect, record, and transmit the experience of the profession.

Perhaps it seems to you, Gentlemen, that the measures which I have ventured to suggest, and the hopes which I entertain, are extravagant and visionary; but let any one, who doubts about the progress which the near future has in store, consider what the recent past has seen accomplished. We would not ask more than this,—that the progress of the next ten years may equal the progress of the last ten. Of the changes in dental schools which I have advocated, the larger number have been already in part introduced, and the rest have been thoroughly proved in the schools of the kindred profession of medicine. The other means of elevating the profession which I have mentioned are not untried; on the contrary, their value has been demonstrated in the actual experience of other professions. Does it seem to any of you that the best part of your profession has no weapons with which effectively to attack abuses intrenched behind the self-interest of the few who profit by them? Let me assure any such doubters that public discussion is a weapon very formidable to those who for sel-

fish ends maintain abuses or resist improvements. Instructed by the history of the professions of law and medicine, let us confide in the power for good of the public sentiment of the profession, expressed in societies like this, in dental journals, and in daily conversation, and reinforced by the informed opinion of the educated public.

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